

Slow Technology as Analytical Lens

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ABSTRACT

This workshop paper considers how the idea of ‘slow technology’ can work as an analytical lens on technology development to reveal alternative dimensions of modern form-giving work. By combining participant observation and prototyping, my work has examined how digital technologies may be used to create and sustain social and material value among handcraft practitioners. I use the concept of “slowness” to emphasize to the form, character, and variety of material practices by which cultural value is produced and reproduced.

Author Keywords

Craft, material, materiality, handwork, skill, apprenticeship, material culture, physicality.

ACM Classification Keywords

K.4.0 Computers and Society: general.

General Terms

Design, Human Factors

INTRODUCTION

For many, the rise of computation has increasing emphasized efficient and speedy execution over human scale production and individuality. However, the mounting popularity of craft—knitting, sewing, pottery—in combination of digital tooling asserts a central role for ideas of ‘slowness’ in the digital realm. Textile designers create hand-woven electrical sensors, typographers join social networking websites, and industrial designers use 3D printers for digital fabrication. An extraordinary range of traditional form-giving techniques is permeated by online endeavors. How might the study of craft, which sits at the nexus of labor and leisure, reveal new avenues for design?

Drawing on fieldwork in craft workshops (*e.g.*, knitting guild, bookbinding workshop, mosaics and ceramics studios), my research examines how different craft materials, digital and non-digital, suggest design opportunities. Across different examples, traces of craftsmanship, wear and decay evoke shared narratives and confer valued status. I further explore these issues in a series of design interventions intended to prompt responses to the process and products of handwork - most recently as an instructor for an interaction design course titled “(Extra)ordinary materials.” In this course, I asked participants to critically engage with materials based on the



Figure 1: Recalling digital annotations associated with a hand knit scarf (left); using tating techniques to control the insulation of conductive thread on a electronic lace brooch (right).

specific traces they leave behind, from heat transferred through piezoresistive fabrics to the grain rendered through the growth of wood. By connecting and interleaving these traces, I find that digital technology has the potential to engage ideas of “slowness” around personal investment. Moreover, I argue that digital media can be designed for longevity by incorporating alternative rhythms of production and use. Based on these insights, my research suggests new directions for design research that emphasize the entanglement of social and material practices.

BACKGROUND

I first delved into questions of craft, rather paradoxically, amid a hotbed of technological change: as a ‘user experience design’ intern for the creative software company Adobe, Inc. My task was to observe users’ engagements with a suite of “professional” creative software, while other employees studied a suite of “hobbyist” creative software. The latter suite appeared similar to the former, yet was comprised of larger buttons and fewer discrete functions. For both software suites, it seemed increasing the efficiency and ease of production was a core aim. Reflecting on my favorite creative pastimes, such as knitting and cooking, I wondered whether the *process* of production might be as salient as the ‘final’ form. I considered to what degree successful design tools was not a matter of enabling speedy execution. How may alternative aspects of creative work—*e.g.*, personal investment, marks of craftsmanship, and traces of time and use—enable meaningful and enduring design practices and products? It was not long before I began to look beyond the tool to the people and practices already there.



Figure 1: (left to right) Barry hand-tools a title on a book spine; Paul & a student examine the mottled pages of old books sent to the binder for cleaning; the binders at work.

All around me, friends and colleagues were flocking to handcraft. Large festivals like Burning Man and Maker Faire, teaching facilities like the Crucible and Center for the Book, as well as independent studios and hacker spaces were energizing a surprising range of personal, “by hand” production. People engaged in handwork as a response to, and an extension of the culture in which they are embedded. Some turn to craftwork in order to counter the values extolled by notions of ‘planned obsolescence’ [9]. Others look to handwork as a reprieve from monotonous managerial work or as a celebration of specific familial, cultural, or personal ritual. These negotiations play out as people answer customer phone calls and maintain their websites. They continue to develop while incorporating new materials—such as conductive papers, and magnetic coils—into old books and tatted shawls. Crafters use digital technologies to reconcile their personal values with their practical needs. In each case, historical continuity is rendered valuable through the process of craft [1,4,5,6].

My dissertation research therefore investigates questions of digital materiality and, crucially, how such questions begin to surface new understandings of ‘slowness’ around cultural production. I use ethnographic methods to examine the collaborative skills enacted through routine craft activity and I build digital tools that instantiate these ideas in speculative prototypes. My colleagues and I [2,4,8] have recently critiqued established notions of the “physical-digital divide” for its rendering of digital content as separate from its physical form. In examining these oppositions I show how new digital information technologies do not uniquely define rhythms of production and use. Instead, they affect the values imbued in, and the engagements described by material practice.

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REFERENCES

1. Bardzell, S., Rosner, D. K., Bardzell, J. “Crafting Quality in Design: Integrity, Creativity, and Public Sensibility.” *ACM DIS’12*, in submission.
2. Blanchette, J.-F. 2011. “A Material History of Bits.” *Journal of the American Society for Information Science and Technology*, 62(6), 1024-1057.
3. Buechley, L., D.K. Rosner, E. Paulos, and A. Williams. 2009. “DIY for CHI: methods, communities, and values of reuse and customization.” In *E.A. of CHI’09*: 4823–4826.
4. Rosner, D. K., “Material Practices of Collaboration.” *CSCW’12*, ACM Press.
5. Rosner, D.K., and A.S. Taylor. 2011. “Antiquarian answers: book restoration as a resource for design.” In *Proc. of ACM HCI*: 2665–2668.
6. Rosner, D., and J. Bean. 2009. “Learning from IKEA hacking: i’m not one to decoupage a tabletop and call it a day.” In *Proc. of ACM CHI ’09*: 419–422.
7. Rosner, D. Blanchette, J., Buechley, L., Dourish, P., Mazmanian, M. *From Materials to materiality: Connecting Practice and Theory in HCI*. To be included in *E.A. of CHI’09*: 4823–4826.
8. Robles, E., and M. Wiberg. 2010. “Texturing the material turn in interaction design.” In *Proc. of TEI’10*: 137–144.
9. Shove, E. 2003. *Comfort, cleanliness and convenience: the social organization of normality*. Berg publishers.

My artifact:

A painting that has hung in my parents' house since I was young. It was painted by my grandmother (who first taught me to paint with oil when I was seven) and depicts my great grandmother as a child (rendered from a photograph).



As documentation of my grandmother's skill, the painting has become an example of my heritage (particularly since my grandmother motivated my interest in design and art). As an image of my great-grandmother, it brings my family history to life. Prompting reflection and pause, and recalling work of the hand, the painting has become an emblem of slow practice – a treasure for my family that will likely get passed down across generations.